

CLAIMS

1. A method of Automatic Repeat reQuest (ARQ) control in a High Speed Downlink Packet Access (HSDPA) communication system, the
5 method including:

transmitting control information from a first station to a second station;

commencing receipt of the control information at the second station;

10 checking whether the control information was received with error; and if so,

generating a negative acknowledgment (NACK) message for transmission to the first station,

15 wherein the control information error checking and acknowledgment message generating is performed at the second station by carrying out processing operations within radio interface layer 1.

2. A method according to claim 1, wherein the control information error checking is carried out by performing a cyclic redundancy check on
20 the control information.

3. A method according to either one of claims 1 or 2, wherein the control information error checking is carried out during receipt of an associated data packet.
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4. A method according to any one of the preceding claims, and further including:

terminating receipt of the associated data packet at the second station upon failure of the control information error checking by carrying
30 out processing operations within radio interface layer 1.

5. A method according to claim 4, wherein the control information is transmitted and received on a common control channel.

5 6. A method according to any one of the preceding claims, and further including:

transmitting the negative acknowledgment (NACK) message from the second station to the first station on the common control channel.

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7. A communication station forming part of a High Speed Downlink Packet Access (HSDPA) communication system, the communication station including:

15 receiving means for receiving control information transmitted from another station; and

processing means for checking whether the control information was received with error; and if so,

generating a negative acknowledgment (NACK) message for transmission to the first station,

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wherein the control information error checking and acknowledgment message generating is performed at the second station by carrying out processing operations within radio interface layer 1.

25 8. A communication station according to claim 7, wherein the processing means acts to carry out the control information error checking by performing a cyclic redundancy check on the control information.

30 9. A communication station according to either one of claims 7 or 8, wherein processing means acts to carry out the control information error checking during receipt of an associated data packet.

10. A communication station according to any one of claims 7 to 9,
wherein the processing means acts to terminate receipt of the associated
data packet at the second station upon failure of the control information
5 error checking by carrying out processing operations within radio
interface layer 1.

11. A communication station according to claim 10, wherein the
processing means acts to transmit and receive control information on a
10 common control channel.

12. A communication station according to any one of claims 7 to 11,
wherein the processing means acts to transmit the negative
acknowledgment (NACK) message from the second station to the first
15 station on the common control channel.